

increase the excretion of RNI and form a nitric oxide-hydroxocobalamin complex. Vitamin B_{12a} (20 mg/kg) was administered intravenously followed by an intraperitoneal administration of LPS (5 mg/kg) or PBS (0.1 ml/100 g) to rats housed in metabolic cages. Urine was collected under mineral oil, in light resistant containers every 24 hr. over the next 72 hr. Rats were allowed food and water or food and water containing vitamin B_{12a} to provide approximately an additional 20 mg/kg/day of vitamin B_{12a}. Total urinary RNI and the ultraviolet-visual spectrum of the hydroxocobalamin in the urine was measured.

FIG. 11 shows that vitamin B_{12a} alternates and prevents LPS-induced hypotension in unanesthetized rats. The UV-visual spectrum show that when hydroxocobalamin was added to the urine of the mammals treated with hydroxocobalamin and LPS, a complex with nitric oxide was formed.

We claim:

1. A method of treating a disease in a mammal characterized by elevated nitric oxide levels in the bloodstream, endothelium or tissues of said mammal, said disease selected from the group consisting of systemic inflammatory response syndrome, sepsis, septic shock, endotoxemia and pertussis consisting essentially of administering to a mammal in need thereof a therapeutic dose of a cobalamin to sequester the excess nitric oxide.

2. The method of claim 1 wherein said cobalamin is selected from the group consisting of hydroxocobalamin (Vitamin B_{12a}), cyanocobalamin (Vitamin B₁₂), transcobalamin or cobamimide.

3. The method of claim 1 wherein said cobalamin is hydroxocobalamin.

4. The method of claim 1 wherein said cobalamin is administered parenterally.

5. The method of claim 1 wherein said cobalamin is administered at a concentration ranging from 0.5 to 50 mg compound/kg body weight in a mammal.

6. The method of claim 1 wherein said cobalamin is administered at a concentration ranging from 5 to 700 mg compound/70 kg body weight in a human.

7. The method of claim 1 wherein said disease is the systemic inflammatory response syndrome.

8. The method of claim 1 wherein said disease is sepsis.

9. The method of claim 1 wherein said disease is septic shock.

10. The method of claim 1 wherein said disease is endotoxemia.

11. A method of alleviating systemic hypotension in a septic patient comprising administering an effective amount of a cobalamin to sequester the excess nitric oxide produced.

12. The method of claim 11 wherein said cobalamin is selected from the group consisting of hydroxocobalamin, cyanocobalamin, transcobalamin or cobamamide.

13. The method of claim 11 wherein said cobalamin is hydroxocobalamin.

14. The method of claim 11 wherein said cobalamin is administered parenterally.

15. The method of claim 11 wherein said cobalamin is administered at a concentration ranging from 5 to 700 mg compound/70 kg body weight to said septic patient.

16. A method of treating a disease in a mammal characterized by elevated nitric oxide levels in the bloodstream, endothelium or tissues of said mammal, comprising administering to a mammal in need thereof a therapeutic dose of a cobalamin to sequester the excess nitric oxide, wherein said disease is pertussis.

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